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NOTICE OF ALLOWANCE AND FEE(S) DUE

27488 7590 12/03/2009

MERCHANT & GOULD (MICROSOFT)
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER	
NGUYEN, THUONG	
ART UNIT	PAPER NUMBER
2455	

DATE MAILED: 12/03/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,959	12/31/2003	Ahmed H. Mohamed	14917.0226US01/MS305420.0	8581

TITLE OF INVENTION: LIGHTWEIGHT INPUT/OUTPUT PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	03/03/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

27488 7590 12/03/2009

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P.O. BOX 2903
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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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nonprovisional	NO	$1510	$300	$0	$1810	03/03/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, THUONG	2455	709-201000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EXAMINER	
NGUYEN, THUONG	
ART UNIT	PAPER NUMBER
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DATE MAILED: 12/03/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 808 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 808 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Notice of Allowability	Application No.	Applicant(s)	
	10/749,959	MOHAMED ET AL.	
	Examiner	Art Unit	
	Thuong T. Nguyen	2455	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *11/11/09*.

2. ☒ The allowed claim(s) is/are *1,3-8 and 10-23*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Applicant's Representative, Yuri Eliezer, on 11/11/09.

3. The application has been amended as follow:

4. In the claims:

5. Claims 1, 6-7 & 23 are amended as following:

1. (Currently Amended) A system for offloading an input/output (I/O) task from a first computer to a second computer, the system comprising:

a client running on the first computer;

a server running on the second computer; and

at least one remote direct memory access (RDMA) channel linking the first computer and the second computer, wherein the first computer and the second computer communicate in accordance with a protocol comprising:

a network discovery phase, wherein the network discovery phase is configured to:

create, by the client, an RDMA connection to the server over a shared RDMA-capable provider;

mutually authenticate, by the client and the server, the RDMA connection;

send, by the server, a credit request message indicating a buffer status of the server, the buffer status corresponding to an availability of the server to process the I/O requests that the client is attempting to offload to the server, wherein the credit request message comprises a first field of a plurality of fields, the first field comprising ~~one of the following~~:

a negative value indicating a number of credits that the client has to give up when, based on the server availability, the sever cannot process any further I/O requests, and

a positive value indicating a number of the credits that the server has newly allocated for use by the client when, based on the server availability, the server can accept further I/O requests from the client, the credits corresponding to a number of I/O requests the client is attempting to offload to the server;

receive, by the client, the credit request message ~~indicating a buffer status of the server, the buffer status corresponding to an availability of the server to process the I/O requests that the client is attempting to offload to the server~~; and

in response to the client receiving the credit request message, send, from the client to the server~~, one of the following~~:

a first indication, if ~~an information~~ the first field in the credit request message comprises the positive value, wherein the first indication notifies the server of at least one of the newly allocated credits that the client has used, and

at least one second indication, if the ~~information~~ first field in the credit request message comprises the negative value, wherein each second indication corresponds to each credit that the client has released and wherein each second indication comprises a credit release value in an offset of a second field of a plurality of fields in each second indication, the credit release value being associated with a remaining amount of releasable credits by decrementing a magnitude of the negative value with each second indication, the offset of the second field being capable of conveying the credit release value in a 32 bit representation;

an I/O processing phase configured to process the I/O requests offloaded to the server, wherein read operations of the I/O phase are implemented using RDMA operations and write operations of the I/O phase are implemented using send operations, wherein the write operations are not implemented using the RDMA operations.

2. (Canceled)

3. (Original) The system of claim 1 wherein the protocol is used in association with a second network protocol.

4. (Previously Presented) The system of claim 3 wherein the second protocol is a server message block (SMB).

5. (Previously Presented) The system of claim 3 wherein the second protocol is a common internet file system (CIFS).

6. (Currently Amended) A computer-readable medium storing computer-executable instructions and computer-readable data comprising a computer program product for use in a

system for offloading an input/output (I/O) task from a first computer to a second computer, the system comprising:

at least one remote direct memory access (RDMA) channel linking the first computer and the second computer, wherein the first computer and the second computer communicate in accordance with a protocol comprising:

a network discovery phase, wherein the network discovery phase is configured to:

create, by the client, an RDMA connection to the server over a shared RDMA-capable provider;

mutually authenticate, by the client and the server, the RDMA connection;

send, by the server, a credit request message indicating a buffer status of the server, the buffer status corresponding to an availability of the server to process the I/O requests that the client is attempting to offload to the server, wherein the credit request message comprises a first field of a plurality of fields, the first field comprising ~~one of the following~~:

a negative value indicating a number of credits that the client has to give up when, based on the server availability, the sever cannot process any further I/O requests, and

a positive value indicating a number of the credits that the server has newly allocated for use by the client when, based on the server availability, the server can accept further I/O requests from the client, the credits corresponding to a number of I/O requests the client is attempting to offload to the server;

receive, by the client, the credit request message ~~indicating a buffer status of the server, the buffer status corresponding to an availability of the server to process the I/O requests that the client is attempting to offload to the server~~; and

in response to the client receiving the credit request message, send, from the client to the server~~, one of the following~~:

a first indication, if ~~an information~~ the first field in the credit request message comprises the positive value, wherein the first indication notifies the server of at least one of the newly allocated credits that the client has used, and

at least one second indication, if the ~~information~~ first field in the credit request message comprises the negative value, wherein each second indication corresponds to each credit that the client has released and wherein each second indication comprises a credit release value in an offset of a second field of a plurality of fields in each second indication, the credit release value being associated with a remaining amount of releasable credits by decrementing a magnitude of the negative value with each second indication, the offset of the second field being capable of conveying the credit release value in a 32 bit representation; and

an I/O processing phase configured to process the I/O requests offloaded to the server, wherein read operations of the I/O phase are implemented using RDMA operations and write operations of the I/O phase are implemented using send operations, wherein the write operations are not implemented using the RDMA operations.

7. (Currently Amended) A method for offloading an input/output (I/O) task from a first computer to a second computer, the method comprising:

discovering, by a client on the first computer and a server on the second computer, at least one shared remote direct memory access (RDMA) capable provider, wherein discovering comprises:

creating, by the client, an RDMA connection to the server over the at least one shared RDMA-capable provider;

mutually authenticating, by the client and the server, the RDMA connection:

sending, by the server, a credit request message indicating a buffer status of the server, the buffer status corresponding to an availability of the server to process the I/O requests that the client is attempting to offload to the server, wherein the credit request message comprises a first field of a plurality of fields, the first field comprising ~~one of the following~~:

a negative value indicating a number of credits that the client has to give up when, based on the server availability, the sever cannot process any further I/O requests, and

a positive value indicating a number of the credits that the server has newly allocated for use by the client when, based on the server availability, the server can accept further I/O requests from the client, the credits corresponding to a number of I/O requests the client is attempting to offload to the server;

receiving, by the client, the credit request message ~~indicating a buffer status of the server, the buffer status corresponding to an availability of the server to process the I/O requests that the client is attempting to offload to the server~~,

in response to the client receiving the credit request message, sending, from the client to the server, one of the following:

a first indication, if ~~an information~~ the first field in the credit request message comprises the positive value, wherein the first indication notifies the server of at least one of the newly allocated credits that the client has used, and

at least one second indication, if the ~~information~~ first field in the credit request message comprises the negative value, wherein each second indication corresponds to each credit that the client has released and wherein each second indication comprises a credit release value in an offset of a second field of a plurality of fields in each second indication, the credit release value being associated with a remaining amount of releasable credits by decrementing a magnitude of the negative value with each second indication, the offset of the second field being capable of conveying the credit release value in a 32 bit representation; and

posting, by the client, the I/O processing requests offloaded from the client for completion by the server on the second computer, wherein read operations are implemented using RDMA operations and write operations are implemented using send operations, wherein the write operations are not implemented using the RDMA operations.

8. (Previously Presented) The method of claim 7 wherein the discovering at least one shared RDMA-capable provider further comprises:

obtaining, by the client, a server request resume key from the server;

opening, by the client, a pipe to the server;

sending, by the client over the pipe, a negotiate request; and

sending, by the server over the pipe, a negotiate response including a minimal list of common providers.

9. (Canceled)

10. (Original) The method of claim 7, further comprising:

registering, by the client, one or more files for use with the server over the RDMA connection.

11. (Previously Presented) The method of claim 10 wherein the registering at least one file comprises:

sending, by the client to the server, a register file message; and

sending, by the server to the client, a register file completion message.

12. (Original) The method of claim 7 wherein the authenticating the RDMA connection further comprises:

sending, by the client, an authenticate request message to the server, the authenticate request message including a key;

if the key matches a previous key sent by the server to the client, sending, by the server, an authenticate response message to the client.

13. (Original) The method of claim 12 wherein the previous key is a key contained in a negotiate response message sent by the server to the client.

14. (Original) The method of claim 12, further comprising:

sending, by the server to the client, a status response message to complete the authenticating.

15. (Original) The method of claim 7 wherein the posting the I/O processing request comprises sending, by the client, one of (a) a close request, (b) a cancel request, (c) a read request, (d) a write request, (e) a vectored read request, and (f) a vectored write request.

16. (Original) The method of claim 15, further comprising:

completing, by the server, the read request and the vectored read request by sending data using RDMA write operations; and

completing, by the server, the write request and the vectored write request by sending data using normal send operations.

17. (Original) The method of claim 15 wherein the vectored write request includes a collapse flag in a header of the request.

18. (Original) The method of claim 7 wherein posting the I/O processing request further includes indicating whether the completion by the server should be in polling mode.

19. (Original) The method of claim 18 wherein the indicating whether the completion should be in polling mode comprises indicating that the completion should not be in polling mode by setting an interrupt flag in a header of the I/O processing request.

20. (Original) The method of claim 18, further comprising: if the client indicates that the completion should not be in polling mode, completing, by the server, the I/O processing request by sending a status block to the first computer by way of RDMA transfer.

21. (Original) The method of claim 18, further comprising: if the client indicates that the completion should be in polling mode, and the client has sent an interrupt request message to

the server, sending, by the server to the client, an interrupt response message by way of an ordinary send.

22. (Original) The method of claim 7 wherein posting the I/O processing request further includes specifying a number of credits in a header of the request.

23. (Currently Amended) A computer-readable media storing computer-executable instructions for implementing a method for offloading an input/output (I/O) task from a first computer to a second computer, the method executed by the computer-executable instructions comprising:

discovering, by a client on the first computer and a server on the second computer, at least one shared remote direct memory access (RDMA) capable provider;

requesting, by the first computer, a server request resume key;

passing, by the second computer, the server request resume key as an authentication mechanism, wherein requesting and passing the request resume key comprises:

creating, by the client, an RDMA connection to the server over the at least one shared RDMA-capable provider;

mutually authenticating, by the client and the server, the RDMA connection;

sending, by the server, a credit request message indicating a buffer status of the server, the buffer status corresponding to an availability of the server to process the I/O requests that the client is attempting to offload to the server, wherein the credit request message comprises a first field of a plurality of fields, the first field comprising ~~one of the following~~:

a negative value indicating a number of credits that the client has to give up when, based on the server availability, the sever cannot process any further I/O requests, and

a positive value indicating a number of the credits that the server has newly allocated for use by the client when, based on the server availability, the server can accept further I/O requests from the client, the credits corresponding to a number of I/O requests the client is attempting to offload to the server;

receiving, by the client, the credit request message ~~indicating a buffer status of the server, the buffer status corresponding to an availability of the server to process the I/O requests that the client is attempting to offload to the server~~,

in response to the client receiving the credit request message, sending, from the client to the server, one of the following:

a first indication, if ~~an information~~ the first field in the credit request message comprises the positive value, wherein the first indication notifies the server of at least one of the newly allocated credits that the client has used, and

at least one second indication, if the ~~information~~ first field in the credit request message comprises the negative value, wherein each second indication corresponds to each credit that the client has released and wherein each second indication comprises a credit release value in an offset of a second field of a plurality of fields in each second indication, the credit release value being associated with a remaining amount of releasable credits by decrementing a

magnitude of the negative value with each second indication, the offset of the second field being capable of conveying the credit release value in a 32 bit representation; and

posting, by the client, the I/O processing requests offloaded from the client for completion by the server on the second computer, wherein read operations are implemented using RDMA operations and write operations are implemented using send operations, wherein the write operations are not implemented using the RDMA operations.

24. (Canceled)

REASONS FOR ALLOWANCE

6. Claims 1, 3-8, 10-23 are allowed.

7. Claims 2, 9 & 24 are canceled.

8. The following is an examiner's statement of reasons for allowance:

In interpreting the claims, in light of the specification and the applicant's arguments filed on 7/29/09, the Examiner finds the claimed invention to be patentably distinct form the prior art of record.

9. Pandya et al. (US 2004/0010612 A1), teach high performance IP processor using RDMA wherein a c client running on first computer, a server running on second computer; at least one RDMA channel linking the first and second computer (abstract; page 5, paragraph 93; page 10, paragraph 115).

10. Henninger et al. (US 5,499,371), teach method and apparatus for automatic generation of object oriented code for mapping relational data to objects, wherein write

operations are implemented using RDMA (abstract; col 10, lines 33-45; col 11, lines 55-60).

11. Wong et al. (US 2004/0003069 A1), teach selective early drop method and system wherein send, by the server, a credit request message, wherein the credit request message comprises one of the following: the number of credits the client have to give up and the number of credits that the server has newly allocated for use by the client (abstract; figure 5-6).

12. The following is an examiner's statement of reasons for allowance.

The examiner has found that the prior art of record does not appear to teach or suggest or render obvious the claimed limitations in combination with the specific added limitations as recited in independent claims 1, 6-7 & 23. The prior art of record fails to teach or suggest individually or in combination that send, by the server, a credit request message indicating a buffer status of the server, the buffer status corresponding to an availability of the server to process the I/O requests that the client is attempting to offload to the server, wherein the credit request message comprises a first field of a plurality of fields, the first field comprising: a negative value indicating a number of credits that the client has to give up when, based on the server availability, the sever cannot process any further I/O requests, and a positive value indicating a number of the credits that the server has newly allocated for use by the client when, based on the server availability, the server can accept further I/O requests from the client, the credits corresponding to a number of I/O requests the client is attempting to offload to the server; wherein each second indication comprises a credit release value in an offset of

a second field of a plurality of fields in each second indication, the credit release value being associated with a remaining amount of releasable credits by decrementing a magnitude of the negative value with each second indication, the offset of the second field being capable of conveying the credit release value in a 32 bit representation as set forth in independent claims 1, 6-7 & 23 and in light of applicant's arguments filed 7/29/09.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina Nguyen whose telephone number is 571-272-3864, and the fax number is 571-273-3864. The examiner can normally be reached on 9:00 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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